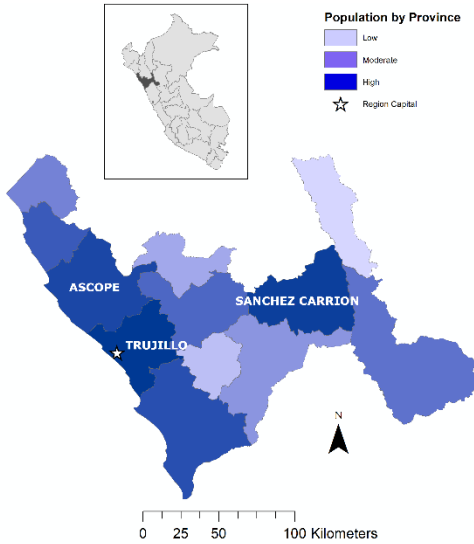


A photograph of a large, snow-capped mountain peak, likely in the Andes, reflected in a calm lake. The sky is a clear, deep blue. The foreground shows a grassy plain and the reflection of the mountain in the water.

Peru: Regional Profiles

National Disaster Preparedness Baseline Assessment

Region: La Libertad



Region Capital: Trujillo
 Region Area: 25,883 km²

La Libertad is one of twenty-five regions in Peru. Located in northern coastal Peru, La Libertad spans the Cordillera Negra and includes the well-known archaeological ruins of pre-Incan Moche and Chan-Chan cultures. Manufacturing, other services (e.g., tourism), and agriculture are predominate economic activities. Trujillo is the region’s capital. As of 2015, the region’s population was estimated at 1,859,640; with the highest percentage of its population residing in the provinces of Ascope, Sanchez Carrion and Trujillo. Relative to the rest of Peru, the population of La Libertad has higher than average life expectancy (75.6 years), higher than average access to improved water (87.8%), poverty (29.5%) higher than the national average, and lower than average illiteracy (6.0%).



Multi-Hazard Risk (MHR) ¹

Score = 0.591, Rank = 5 of 25

Of the twenty-five regions of Peru, La Libertad ranks 5th in multi-hazard risk (MHR = 0.591). Table 1 outlines the individual components that contribute to risk. As shown, La Libertad’s very high multi-hazard risk is a function of its very high multi-hazard exposure (MHE = 0.857), high vulnerability (V = 0.475), and high coping capacity (CC = 0.558). The ternary graph at right shows that La Libertad’s exposure is significantly higher than the national average, while vulnerability is similar and lack of coping capacity is slightly lower.

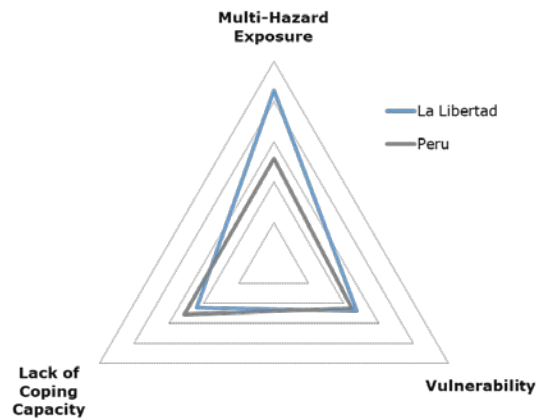
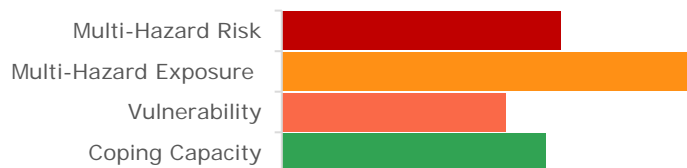


Figure 1. Components of the Multi-Hazard Risk Score compared to the national average.

¹ **Multi-Hazard Risk:** The likelihood of losses or disruptions to a region’s normal function due to interaction between multi-hazard exposure, socioeconomic vulnerability and coping capacity.

Components of Multi-Hazard Risk (MHR) ²

Table 1. Scores and ranks for each component of the Multi-Hazard Risk Score.

Multi-Hazard Exposure (MHE)		Vulnerability (V)		Coping Capacity (CC)	
Very High		High		High	
Score	Rank (of 25)	Score	Rank (of 25)	Score	Rank (of 25)
0.857	1	0.475	10	0.558	6

Multi-Hazard Exposure (MHE) ³

Score = 0.857, Rank = 1 of 25

La Libertad has very high multi-hazard exposure relative to other regions of Peru (MHE = 0.857). Percentages of the region's population exposed to varying hazards are summarized below.

Table 2. Estimated ambient population⁴ exposed to each hazard type.

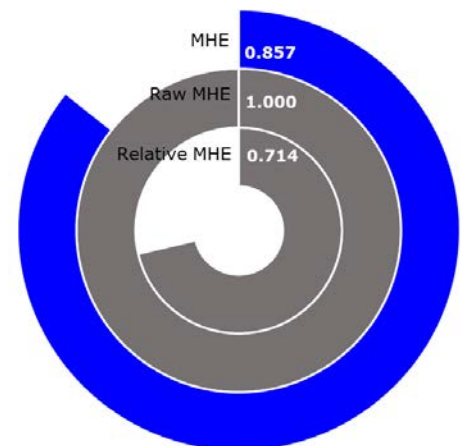
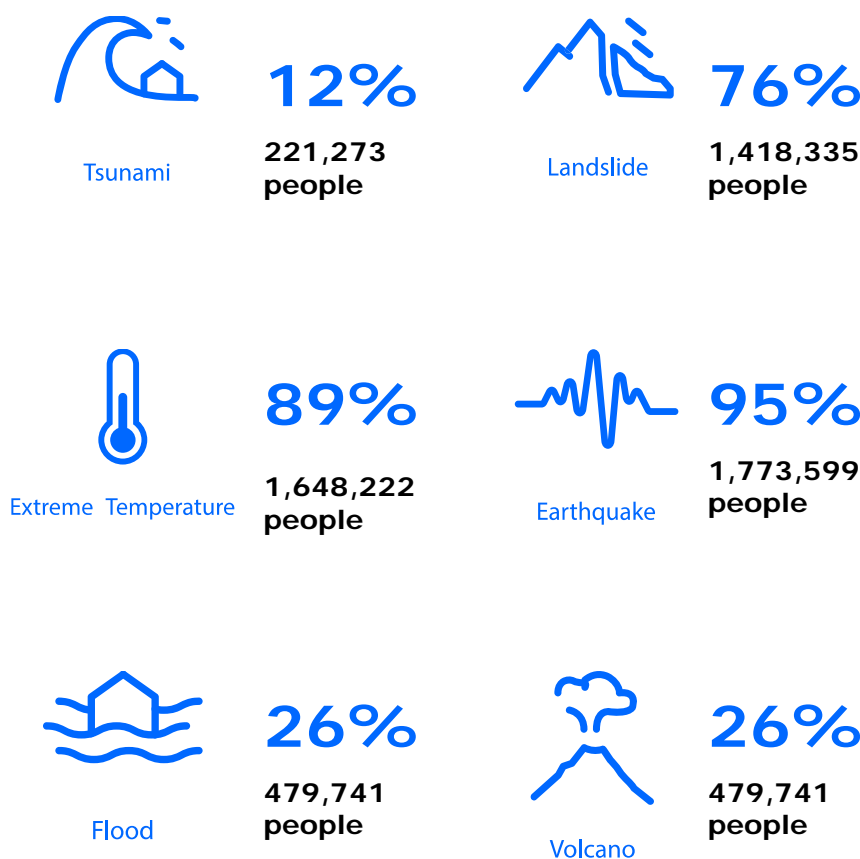


Figure 2. Average, raw and relative Multi-Hazard Exposure Scores.

² $MHR = (MHE + V + (1-CC))/3$.

³ **Multi-Hazard Exposure:** Average exposure of the population to hazards.

⁴ **Ambient Population:** 24-hour average estimate of the population; typically differs from census population.

Vulnerability (V) ⁵

Score = 0.475, Rank = 10 of 25

La Libertad has high vulnerability relative to other Peruvian regions (V = 0.475). The bar chart on the right displays the composition of its overall Vulnerability Score. As shown, vulnerability in La Libertad is driven primarily by environmental stress, population pressures and economic constraints. The table below summarizes the individual indicators within each socio-economic theme.

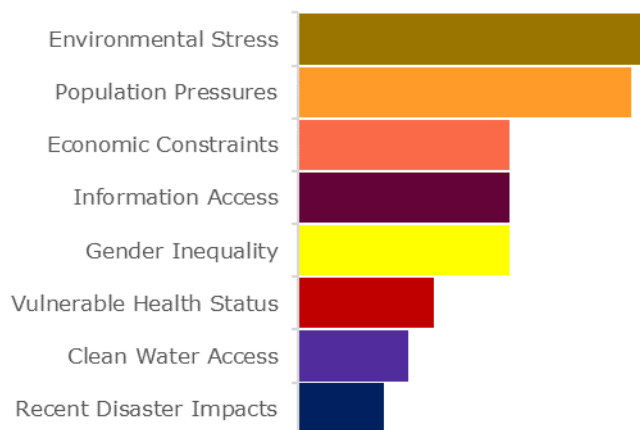








Figure 3. Components of the Vulnerability Score by relative contribution.

Table 3. Indicators of vulnerability grouped by theme.

	Environmental Stress	10.6 % of total regional area with irrigation-fed agriculture	29.4 % of total regional area with severe erosion				
	Vulnerable Health Status	14.4 Infant mortality rate per 1k births	70.9 Maternal deaths per 100k births	75.6 Average life expectancy (years) at birth	22.1 % of children under 5 years of age that are malnourished	4.0 % of population with 1 or more disability	
	Clean Water Vulnerability	87.8 % households with access to improved water	71.9 % households with access to flush toilets				
	Information Access Vulnerability	6.0 % of population 15yrs and older that are illiterate	9.4 Average years of schooling	70.4 % primary school enrollment	21.6 % households with internet	81.7 % households with television	73.1 % households with radio
	Economic Constraints	0.54 Ratio of dependents to working age population (15-64 years)	58.22 Ratio of average monthly household expenses to income	29.5 % of population monetarily impoverished			
	Gender Inequality	0.50 Proportion of female representatives in local government	0.90 Ratio of female to male secondary enrollment	0.76 Ratio of female to male labor participation			

⁵ **Vulnerability:** The socioeconomic conditions that are associated with susceptibility to disruptions in a region's normal functions.



Population Pressures

1.3
% Average annual population change (2010-2015)



Recent Disaster Impacts

32.8 Average annual hazard-related deaths per 10k persons (2010-2014)

1.5 Average annual number of homes destroyed by recent hazards per 10k persons (2010-2014)

Coping Capacity (CC) ⁶

Score = 0.558, Rank = 6 of 25

La Libertad has a high coping capacity relative to other regions (CC = 0.558). The bar chart on the right displays the composition of its overall Coping Capacity Score. As shown, coping capacity in La Libertad is hindered primarily by its environmental and economic capacities. The table below summarizes the individual indicators within each socio-economic theme.

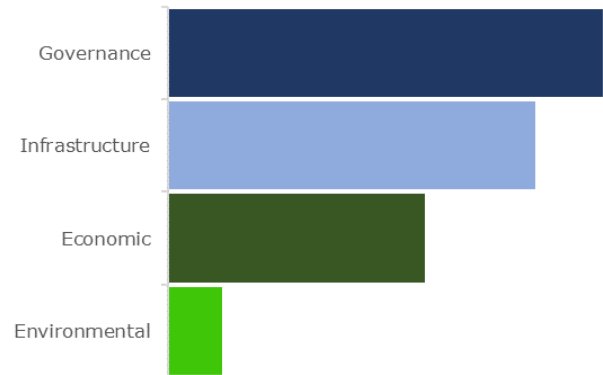


Figure 4. Components of the Coping Capacity Score by relative contribution.

Table 4. Indicators of coping capacity grouped by theme.



Economic Capacity

\$1,092 Average monthly income (\$)

\$13,921 Gross domestic product per capita



Governance

1.76 Registered cases of sexual violence per 10k persons

0.19 Registered cases of missing persons per 10k persons

0.004 Average annual number of social conflicts per 10k persons (active and resolved)

6,794 # of voters per 10k persons (2014 election)






Environmental Capacity

2.9 % protected or reforested land

⁶ **Coping Capacity:** The systems, means and abilities of a region to absorb and respond to events that could potentially disrupt normal function.



Infrastructure Capacity

	Healthcare Capacity	13.8 # of hospital beds per 10k persons	21.4 # of nurses per 10k persons	22.8 # of physicians per 10k persons
	Communications Capacity	31.5 % households with fixed phone line	84.5 % households with mobile phone	
	Transportation Capacity	1.2 Port/airport density per 10,000 sq km	2,821.5 Road/rail density per 10,000 sq km	

Resilience (R) ⁷

Score = 0.542, Rank = 10 of 25

Resilience is a function of both vulnerability and coping capacity. La Libertad is more resilient than the national average, and its high Resilience Score (R = 0.542) is due to its high vulnerability countered by high coping capacity. The region's baseline indicators suggest a focus for resilience-building efforts. In La Libertad, the thematic areas with the weakest indicator scores and rankings are summarized in the table below. Readers can additionally consult Appendix 1 for a comprehensive assessment of its need for specific program types relative to other regions.

Table 5. The top 3 thematic areas with the weakest relative scores.



Environmental Stress



Population Pressures



Environmental Capacity

⁷ **Resilience** is a hazard-independent look at current socio-economic conditions affecting the short-term ability to absorb, respond to, and recover from disruptions to a region's normal function.